Date: Thu, 25 Mar 93 23:30:35 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #379
To: Info-Hams

Info-Hams Digest Thu, 25 Mar 93 Volume 93 : Issue 379

Today's Topics:

20 ma Current loop specs
Boy, this can turn me off!
Comments on JPS NIR-10 DSP Audio Filter
CW timing and rare char.
Hf satelites
Kantronics KPC-3 RAM Upgrade
Looking for Israeli amateur radio operators.
Nicad Memory Effect-Fact or Myth?
Offset to UTC calculation?
Real NoCodes
White House To Auction Airwaves

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

Date: Wed, 24 Mar 1993 23:24:42 GMT
From: tarpit!tous!bilver!jwt!ksj@uunet.uu.net
Subject: 20 ma Current loop specs
To: info-hams@ucsd.edu

mann@eskimo.com (Tom Mann) writes:
> Well, no one gave me a circuit for interfacing RS-232 to 20 ma current loop
> so it looks like I have to design my own. Can anyone tell me what 20 ma curre
> loop 'looks' (voltage level, impedance, etc) like?

Voltage is anything between 5 and 24, and impedance is whatever's required
to draw 20 mA through both devices on the loop. Easiest way would be to

measure (using the potentiometer/voltmeter method) the output impedance of
the device to which you're interfacing, then match that at the opposite end
and calculate voltage to get your 20mA target current.

Data formats are otherwise identical to the RS-232 standard.

     Scott

Date: 26 Mar 1993 02:46:26 GMT
From: dog.ee.lbl.gov!pasteur!agate!usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!
zaphod.mps.ohio-state.edu!sdd.hp.com!col.hp.com!bobw@network.UCSD.EDU
Subject: Boy, this can turn me off!
To: info-hams@ucsd.edu

gganderson@augustana.edu (KEVIN L. ANDERSON (7325)) writes:
> As an outsider and someone just now considering getting a ham ticket, and
> only reading this newsgroup for a short time, I can't say that reading
> the postings (I am referencing here "no code" etc) are helping to get
> excited about this hobby. It is instead turning me off, and before I even
> get started! (For the record, I was considering novice or coded tech on the
> way to an eventual general license, but it sounds like "darned if I do,
> darned if I don't" regardless of what I choose!)
>
  [stuff deleted]
>
> Thanks for for letting me voice my beef. And, as I think you say, SK, for I
> am all done. Caputt.
>
> Cheers and 73.
>
> Kevin Anderson

  Kevin,
  Unfortunately, one of the characteristics of many of the 'news' groups
  is the tendency for a minority of the individuals involved to flame
  people for fun or other unknown reasons. Its more a symptom of
  the media than of the particular topic of the news group.

  Yes, you will encounter some of these folks on the air, too.

  E-mail me if you have more questions. Other than the FAQ posting,
  rec.radio.amateur.misc is not that great of a way to learn for
  a novice. (But its really good for experienced people to argue
  the fine points of the hobby :-)

 Bob Witte / HP Colo Springs / bobw@col.hp.com   / KB0CY

Date: 26 Mar 1993 05:59:21 GMT
From: noc.near.net!bigboote.WPI.EDU!bigwpi.WPI.EDU!gkd@uunet.uu.net
Subject: Comments on JPS NIR-10 DSP Audio Filter
To: info-hams@ucsd.edu

The following comments represent a rather thorough assessment of the JPS NIR-10 DSP Audio Filter which I picked up a few weeks ago. Their emphasis is on the use of the NIR-10 for shortwave broadcast listening and SSB utilities monitoring, but hams who are thinking about the NIR-10 should find them to be of some value as well.

****

It was about five years ago when I first seriously thought about getting an active filter to use with my ICOM R71A HF receiver. I was doing lots of listening in the HF spectrum to Shortwave Broadcasts, Utilities stations, and hams; and had been impressed by how much more pleasant a friend's Datong active audio filter made his receiver sound. But living in a densely populated residential area, I was also facing the growing problem of wideband noise generated by an ever increasing number of computers, electronic appliances, power lines, etc. in the neighborhood. The usefulness of traditional audio filters was limited in combatting this type of problem, but the newer Digital Signal Processing (DSP) devices sounded promising. I'd seen advertisements for the JPS NIR-10 DSP audio filter, and after reading some favorable reviews, decided to investigate it. (I'd also looked into the W9GR DSP construction project which was in QST last year, but after getting feedback on both, decided that the JPS would be better suited to my needs.)

I wrote to JPS for information on the NIR-10, and also asked about the company's background and product line. Since it was only about a year ago that I first heard of JPS, I was curious as to how well established it was.

A very professional looking packet of information promptly arrived, which detailed an advanced line of DSP products; mostly oriented toward commercial communications systems. These products included Noise Reduction units, phone patches, bidirectional audio repeaters, voice modulation recognizers, switch matrices, and audio distribution products. An enclosed letter from Tom Jacks, JPS Vice President of Marketing, read in part:

> "...I have enclosed a data package showing JPS Communications' present product line. Our two Amateur/SWL products, the NIR-10 and the NF-60, are included. We expect to have at least two more DSP-based products for the Amateur/SWL market released in the next few months. As you can see...JPS' primary thrust is into the

> Commercial/Paramilitary market. Our RTU-200 Radio/Telephone Interface Unit (phone patch) is currently being private labelled or sold to virtually every US manufacturer of HF Communications equipment. It is standard equipment in the White House Communications Agency. Why so popular? It is the only automatic phone patch in the world that works reliably on inferior telephone lines as well as good ones...
>
> "Our NRU-500 Noise Reduction Unit is used in numerous communications centers to quiet noisy receiver audio and reduce fatigue on the operators. It is also used by law enforcement agencies...to clean up noisy surveillance tapes. The NIR-10 is a 'little brother' of the NRU-500 and is the result of many requests by agency personnel to have equipment for their ham shacks that would have similar performance to what they had on the job.
>
> "JPS Communications, Inc. was founded in 1988 by three engineers who had many years of experience in the design of HF communications equipment for such companies as Harris RF Communications, Sunair Electronics and ITT Mackay Communications. Since it's inception, JPS has doubled its sales every year and this year looks like it will continue that trend. We currently have 25 employees, including an engineering staff of seven."

Pretty impressive...and a lot more information than I ever expected to receive. I called JPS and spoke with Mr. Jacks. He was most helpful and enthusiastic in answering my questions. A couple of days later, I ordered the NIR-10 from JPS. It was shipped that day.

Unpacking the NIR-10, my first impression was that it was a very well-constructed looking device. The controls had a quality "feel" to them, and there seemed to be much attention paid to detail. Moving across the front panel from left to right, there is a toggle switch for power, a green LED power indicator, a three-position mode toggle switch (noise/interference reduction or 'NIR' mode, bandpass mode, and bypass mode), a three position bandwidth selector toggle switch for use in the bandpass mode (when in NIR or bypass mode, this switch is used to turn on and off the automatic notch filter), a potentiometer to adjust the NIR level when in NIR mode or shift the passband when in bandpass mode, a red "peak' led used to adjust input volume, an output volume control, and a headphone jack.

The back panel has phono jacks for input and output audio and for remote bypassing. The latter is for hams who wish to use the NIR-10 but still be able to monitor their own transmitted signal. The jack can be wired to the transceiver's PTT line to force the NIR-10 into bypass mode when the microphone is keyed. (Audio passing through the NIR when it is not in bypass mode is delayed 130 milliseconds, which would make it difficult to monitor one's own signal.) There is also a ground connection and a coaxial

power connector on the rear panel. The power connector is a standard size, although the inner pin diameter is 2.5 mm as opposed to the more common 2.1 mm ID connectors found on other ham and SWL equipment. I purchased the optional 12 VDC 1 Amp power adapter for the NIR, although it can operate from any properly regulated 11-15 VDC 1 Amp power source. The power connector is reverse polarity protected, and all other inputs are protected to +/- 50 Volts.

The NIR-10 has three main operating modes; the NIR (noise/interference reduction mode), the bandpass mode, and the automatic notch filter (NF) mode. The NIR and NF modes can be operated either independently or in conjunction with each other, while the bandpass mode can only be operated by itself. The NIR mode is the primary reason I bought the unit. It samples the input audio looking for speech content, and attenuates everything else. The multiple automatic notch filter is used to remove one or more heterodynes automatically as soon as they appear. The bandpass mode provides three vertically skirted audio passband widths which can be shifted up or down in frequency. The DSP operation may also be bypassed, allowing audio to simply pass through the NIR's audio input & output circuits.

When the NIR-10 is powered down, the input audio is bypassed directly to the speaker/headphone outputs via a relay. This should not be confused with the bypass switch on the front panel, which still routes the audio through the NIR-10's audio circuits while bypassing the DSP function. I found that the audio passing through the NIR-10 while powered up in the "bypass" mode was considerably narrower in fidelity than the audio which my ICOM delivered to the speaker when the NIR-10 was powered off. The difference wasn't very significant in the SSB mode, but when listening to AM broadcasters a lot of fidelity was lost. For this reason, it would be nice if the NIR-10 had a function to completely bypass it's circuitry without powering it off. (The unit must go through a brief diagnostic sequence every time it is powered on.) Since the necessary relay already exists within the unit, the addition of a switch is all that would have been required. (Of course, an external audio bypass can also be constructed.)

The NIR-10's audio bandwidth is obviously optimized for single sideband communications rather than high fidelity applications. (The specifications give it a frequency response of 300 Hz to 3200 Hz, +/- 2 db.) Anyone considering using it for Shortwave or Mediumwave broadcast listening should be aware of its restricted audio fidelity. Compared to the audio coming directly out of my ICOM R71A (which is medeocre for broadcast listening to begin with), the NIR-10 produced a "punchier," cleaner sounding voice; but one with it's dynamic qualities stripped. It made broadcast voices sound something like SSB transmissions. Whether this is an important consideration or not depends to an extent on individual preference and listening habits, and to an extent on the audio characteristics of the receiver being used. Sitting quietly in front of the radio listening to a clean, local signal, I preferred the sound of the ICOM's own output. But I

found that if I was moving around doing other things while listening, or if there was other noise in the room, the NIR-10's audio often made it easier to hear what was being said with the volume set at a lower level.

After noting the audio characteristics of the NIR-10, I engaged the NIR function while listening to speech on a local broadcast station. Increasing the NIR level adjust, the speech began to take on a "mechanized" sound as if it were coming to you in "packets" rather than as a continuum. (It almost reminded me of the way WWV sounds now, or of those "digitized" marine information broadcasts.) On a strong, clean signal, one would have no reason to use the NIR function. I tuned to a talk show on a weak broadcast station with considerable hiss on the signal. Turning up the NIR level produced the same "mechanized" sound, but also quieted the speaker between voice "packets." The hiss and noise on the signal was almost completely gone! The tradeoff, though, was a less natural sounding voice.

This mechanized sound takes a little getting used to. I sat in front of the radio turning on and off the NIR function trying to decide which way the audio was easier to understand, and found that comprehension with the NIR was not any better than without it. I soon learned that this was not the way to evaluate the NIR-10. The manual makes an important distinction between intelligibility and "listenability" which is worth mentioning here:

> "Noisy speech is speech that has been corrupted by some type of noise...Speech which has been corrupted by noise has irretrievably lost some of its original characteristics. Complete removal of all noise...may sometimes result in speech which is harder to listen to and interpret than the same speech with some particular noise components retained. There is a trade-off between intelligibility (can one determine what is being said?) and `listenability' (how pleasing...or grating...is the monitored audio?). Maximum noise component removal may turn an irritating, noisy...signal into one that's much more pleasing to the ear, but the received speech must be understood as well. The aim of noise reduction in speech is to improve not only the listenability of the noisy speech, but to improve its intelligibility as well... Fatigue may result when an operator attempts to interpret noisy speech for extended periods. There are times when intelligibility is more important than pleasantness of the signal, while at other times emphasis is placed on listenability."

With that in mind, I tuned in my noisy talk show and went about other business while I listened without the NIR engaged. After a while I engaged the NIR and continued to listen. I quickly found listening with the NIR to be much less tiring than without it. It didn't take long to get used to the mechanized aspect of the voice, which was much easier to deal with than the noise.

The optimum amount of noise reduction can always be precisely set using the continuously adjustable NIR level control. On stronger signals, the control can be advanced to the point where all noise components virtually disappear. On signals which are down "in the mud," the control must be reduced to prevent the desired speech from being chopped up. The proper operation of this control is very important if one is to realize maximum benefit from the NIR function, but adjusting it is not difficult with a little practice.

I found that when listening to noise-free shortwave broadcasts with good audio characteristics (such as the VOA), I would shut off the NIR-10 altogether and listen to the radio's audio directly. But in practice, the majority of shortwave broadcasts did not fall into this category. Most had some noise component (or just had poor audio to begin with), and these often sounded better using the NIR function. Program jingles and musical content would be lost if the NIR level was set high enough, since the NIR software interprets music as noise and tries to remove it.

Very weak, noisy signals are another story. I tuned in both SSB transmissions and AM broadcast signals which were barely audible and challenging to understand. The NIR-10's performance on these was mixed. In some cases, the NIR was able to remove enough of the noise to make an uncopyable signal copyable. In other cases, the NIR only made a bad situation worse and cut up the signal I was trying to hear. The manual acknowledges the NIR-10's limitations:

> "...it is impossible to completely recover speech when heavily corrupted by noise...Because of this, use of the NIR mode at signal-to-noise ratios of 0 db and below may actually reduce intelligibility rather than enhance it."

I found that in most cases of heavily corrupted signals, the NIR didn't significantly improve intelligibilty (there were notable exceptions though). It did a much better job improving the listenability of signals which were already intelligible. I tried punching in 5598.0 KHz USB, which is one of the North Atlantic Air Traffic Control frequencies. Most of the signals were well above the noise floor and easily copyable, but there was still a noticeable amount of noise on the signals and during the long pauses between transmissions. The NIR-10's NIR function quelled the band noise, turning it into a rhythm of low level digital "bleeps" above which the voices projected loud and clear. Monitoring the frequency became much less tiring, although I would occasionally have to reduce the NIR level to accommodate a particularly weak signal. This test was perhaps the most dramatic demonstration of the NIR's effectiveness, and one which applies to the ham bands as well.

Like the mechanized sound of the voice, the digitized "bleeping" which replaces the band noise takes some getting used to as well. Once I became accustomed to it, I usually found it much less annoying than the original

band noise; primarily because it was at a much lower level. The manual does make mention of the characteristics of this noise:

> "...the noise left over after reduction has an "electronic" sound. This is not an artifact introduced by processing as one might think, but rather it is all that remains of the original input noise, which, because of its random nature, cannot be removed completely. Unfortunately, this residual noise has also been de-randomized to some extent, so it occurs in bursts, Thus, it sounds unnatural and can be more annoying than white noise. The higher the level of noise in the input, the higher the level of this residual at the output."

The NIR mode does a good job removing hiss, impulse static, electric line noise, computer noise, and buzzing noises. It is not effective on static crashes, which burst through as a sharp report. The static crashes are sometimes more noticeable than without the NIR because the rest of the band noise has been reduced so much, but they also don't seem to linger as much.

The NIR mode is also not effective on adjacent channel SSB/AM interference, but this can be removed using the bandpass function. The near-vertical skirts of the bandpass mode really need to be experienced to be appreciated. Take a strong heterodyne signal and slowly adjust the bandpass shift. All of a sudden the signal will just "pop" into oblivion. The manual does note that strong signals right near the bandpass edge will cause a clicking sound in the audio; which is the digital equivalent of "ringing" in analog filters.

JPS markets two versions of the NIR. The ham version has 250 Hz, 600 Hz, and 1.8 KHz bandwidths in the bandpass mode, and the SWL version has 1.8 KHz, 2.4 KHz and 3.0 KHz bandwidths. (Other combinations are available at additional cost.) I ordered the SWL version since I was mainly interested in voice. While the 1.8 KHz and 2.4 KHz bandwidths are well chosen, the 3.0 KHz bandwidth is about as wide as the NIR-10's audio in the bypass mode. I can't find much of a use for it, and would have rather seen one of the narrower non-voice bandwidths (probably 600 Hz) included instead.

According to the manual, the bandpass function is intended mainly for digital and data signals (RTTY, packet, SSTV, etc.), which the NIR function tends to interpret as noise. In practice, I usually prefer the NIR function over the bandpass function when listening to voice signals. If there is any adjacent channel interference on SSB transmissions, I'll try combatting it with the ICOM's passband tuning control first.

This brings up an important point: Don't expect the NIR-10 to take the place of all the advanced features on your receiver. I still find myself using the rig's bandwidth filter options, passband tuning, IF notch filter, RF gain, and noise blanker controls just as much as ever. (The same goes for

the low-pass/high-pass filters on the Kenwood SP-940 speaker which I use with the receiver.) They perform the same functions as always; the NIR-10 gives you additional power.

For example, adjacent channel interference in SSB may be attenuated by either the rig's passband tuning circuit or by the bandpass mode on the NIR-10. Using the receiver's passband tuning control has the advantage of removing the interference within the AGC loop. On the other hand, it's skirts aren't as steep as the vertically skirted bandpass filters in the NIR-10. An effective compromise is to use the passband tuning to get rid of enough of the interferene so that it no longer drives the AGC, and use the bandpass tuning on the NIR to remove the rest of it.

For a second example, consider the NIR-10's automatic notch filter. This filter attacks and removes most heterodynes before you even know they exist; and it can handle multiple heterodynes too (although it's effectiveness deteriorates if it tries to do too many at once). This is vastly superior to the manual, finiky IF notch filter on the ICOM, but there are times when it is preferable to use the ICOM's notch filter. A particularly strong heterodyne will affect the receiver's AGC circuit. The IF notch filter will get rid of it within the AGC loop and solve this problem. I've also found that the NIR-10's notch filter sometimes doesn't act on very weak heterodynes, which the ICOM's IF notch filter has no trouble removing.

LEFTOVERS:

I didn't evaluate the NIR-10 on CW and data modes. On CW, the manual states that the NIR function can be used at speeds above about 7 WPM. The manual also shows how the NIR-10 can be used for transmit audio processing with proper interfacing.

The audio input level is a snap to adjust using the receiver's volume control and the red "peak" LED on the front of the NIR-10 as a guide. (The output level is controlled using the volume control on the NIR-10.) An internal jumper is used to select high or low input levels. Connecting the NIR-10 to my ICOM's speaker jack, I find I have to drive the ICOM's audio amplifier harder than I'd like to when the jumper is in the high position. Moving the jumper to the low position makes the input too sensitive for the ICOM speaker jack. I may eventually try piggybacking a resistor into the level-select circuit to make the low position a bit more sensitive.

The audio output amplifier can handle short or open circuits without damage. There is no record output jack on the NIR-10. When copying certain signals, it would be helpful to be able to toggle between the bandpass and NIR modes. This can be done, except that the same control is used to adjust the NIR level and the bandpass range. It must be readjusted every time the mode is switched. Separate controls for these two functions would have been a nice

"frill."

A major concern I expressed when considering whether to get the NIR-10 was the extent to which it radiated RFI. My wire receiving antennas connect directly to the ICOM, so the NIR would in essence be sitting about a foot away from the antenna. Below 20 MHz, I have yet to experience any RFI whatsoever. Between 20 and 30 MHz, RFI does begin to show up in places. It is very low in level for the most part, but I've had a few signals where copy improved when the NIR-10 was turned off. I doubt that anyone using resonant antennas mounted a distance from the NIR-10 would notice any RFI. RFI generated in the VHF spectrum is a bit more prominent. I've heard motorboat-type sounds from the NIR-10 on my FM broadcast receiver in the shack, and on scanners and 2 meter receivers. Again, external antennnas generally cure this problem too. In any event, any RFI coming from the NIR-10 is certainly much less severe than what most computers and packet stations generate.

The NIR-10 manual was obviously written with the hobbyist in mind, because it begins with a very concise step-by-step procedure for getting the unit hooked up and operational. Overall, it is very well written and complete. A schematic diagram is provided for the power supply and audio circuits of the NIR-10, and a block diagram is provided for the DSP section.

JPS states that registered purchasers will receive automatic notification of any software upgrades which are developed for the NIR-10. Such upgrades are offered to NIR-10 owners at cost (approx. $15), and are user-installable.

CONCLUSIONS:

The NIR-10 is probably more of a luxury than a necessity, but for me it was definitely worth it. One does have to take a little time to become accustomed to the NIR-10's sound and operation before it can be fairly judged. It's benefits are readily apparent on SSB transmissions, but on shortwave broadcasts they can be more difficult to recognize. A conventional audio filter may have some advantages over the NIR-10 in being able to tailor the audio response over a wider fidelity range, but the NIR-10's strength lies in its ability to remove noise from within the vocal spectrum while leaving the voice component largely untouched.

There is also an element of subjectivity in evaluating the NIR-10. I find listening to electrical static and buzzing to be especially grating, but some have an easier time overlooking these factors and are more concerned with maintaining natural sounding audio. If you're one of those people who enjoys cranking up the volume and letting the band noise resonate throughout your head, I'd put your money elsewhere. On the other hand if your someone like me who likes peace and quiet, and prefers to listen at low volume levels without excessive strain, then the NIR-10 may be worthwhile.

[An additional review of the NIR-10 appeared in the Oct. 1991 QST (pg 36).]

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SELECTED SPECIFICATIONS

```
Audio input.............................Unbalanced 22 ohm (or 47K ohm)
Frequency response......................300 to 3200 Hz +/- 2 dB
Input level.............................120 mV to 2.8 V RMS
                                        (internal level select jumper)
Absolute output delay
    NIR and Bandpass modes..............130 milliseconds
    Bypass mode.........................  0 milliseconds
NIR mode white noise reduction
    MAX control position................Approximately 20 dB
    MIN control position................0 dB
NIR mode single tone reduction
    MAX control position................Greater than 40 dB
    MIN control position................0 dB
Time to cancel a suddenly-appearing tone
    NIR mode............................About 250 milliseconds
    NF mode.............................About 3 milliseconds
BP mode bandwidths
    Amateur.............................. 250 Hz,  600 Hz, 1800 Hz
    SWL.................................1800 Hz, 2400 Hz, 3000 Hz
BP mode center frequency................Continuously variable 300-3200 Hz
BP mode ultimate rejection..............Greater than 60 dB
NF mode ultimate rejection..............Typically greater than 50 dB
                                        (one to four tones)
Speaker output..........................2W @ 10% dist. into 3.2 ohm spkr.
Audio output distortion.................< 0.5% @ 1 KHz @ 0.5 Watts
Input power.............................11 to 15 VDC @ 0.5A avg., 1A peak
```

Date: Thu, 25 Mar 93 21:34:41 GMT
From: swrinde!elroy.jpl.nasa.gov!sdd.hp.com!zaphod.mps.ohio-state.edu!
cs.utexas.edu!geraldo.cc.utexas.edu!slcs.slb.com!leo.asc.slb.com!sjsca4!
jones@network.UCSD.EDU
Subject: CW timing and rare char.
To: info-hams@ucsd.edu

Uri Blumenthal (uri@watson.ibm.com) wrote:
: In article <1545@mwuk.UUCP>, tony@microware.co.uk (Tony Mountifield) writes:
: |> I believe ---. is already defined as the German o" (o umlaut).

There's a table of these things in one of the ARRL manuals, either the

Handbook or the Operating Manual (or maybe both ;-). It also includes things like Japanese and Arabic characters. (I'm having enough trouble just getting my code speed up to 20WPM with English Morse code and prosigns without worrying about things like this.)

--
Disclaimer: The opinions expressed above are mine and not those of Schlumberger because they are NOT covered by the patent agreement!

Phone: (602) 345-3638 RF: N7RPQ
Snail: Clark Jones, Schlumberger Technologies, 7855 S. River Pkwy #116, Tempe, AZ 85284-1825

Date: Fri, 26 Mar 1993 06:08:22 GMT
From: usc!cs.utexas.edu!utnut!torn!nott!cunews!freenet.carleton.ca!Freenet.carleton.ca!ab718@network.UCSD.EDU
Subject: Hf satelites
To: info-hams@ucsd.edu

In a previous article, gcouger@olesun.okstate.edu (Gordon Couger) says:

>
>I am interested in trying to use some of the
>satellites that have HF capabilities. I need to
>know which birds have this capabilities and
>what there frequencies are.
>
>If any one can point me in the right direction
>it would be appreciated.
>
>Gordon
>AB5D

Hi Gordon, today I just bought the ARRL's "The satellite experimenter's handbook". It looks like the satelite you want are the Russian satellites RS12/13.
RS12 Mode K Uplink is 21.210-21.250 Downlink is 29.410-29.450
The translation constant is +- 8.200. The +- is because of the doppler effect.
RS13 Mode K Uplink is 21.260-21.300 Downlink is 29.460-29.500

If you have a 2M allmode, you might want to try the RS10/11.

Good luck
Daniel VE3DCL @VE3KYT.#EON.ON.CA

--

Date: Fri, 26 Mar 1993 02:50:27 GMT
From: swrinde!zaphod.mps.ohio-state.edu!rpi!operators.its.rpi.edu!
abelson@network.UCSD.EDU
Subject: Kantronics KPC-3 RAM Upgrade
To: info-hams@ucsd.edu

Could someone tell me what I might expect to pay for the 128k or 512k
RAM upgrade for the KPC-3? Is 128k (or 512k)x 8 static ram only available
from Kantronics or is there another (less expensive) supplier of these
chips?

Thanks for any info.

mla

--
....
Mike Abelson | Adoption is all about looking *beyond*
Information Technology Services | genetics. Human bonding is what's
RPI Troy, NY 12180-3590 | important, not who's genes are involved.
abelson@rpi.edu | --J.W. Jeffries
....

Date: Fri, 26 Mar 1993 02:44:10 GMT
From: gsm001!gsm001.mendelson.com!gsmlrn@uunet.uu.net
Subject: Looking for Israeli amateur radio operators.
To: info-hams@ucsd.edu

Hi,

I am hoping to make aliyah this summer (I know, I've been saying it for
2 years now). I expect to receive a Techician class amateur radio license
in early may (I passed the test, I'm waiting for the FCC to do their thing).

I would like to continue my ham radio hobby in Israel.

Any advice, besides don't go :-), would be welcome.

Are there Israeli's out there with U.S. Extra class tickets? I would
like to upgrade to general or beyond and don't want to have to take a
trip to the U.S., Saudi Arabia, or Kuwait to do it.

I'm not sure where we will end up living. I hope to be staying for about
6 months at an absorption center (mercatz klita) in either Tel Aviv or
Raanana, but who knows where they will put us.

Thanks,

Geoff.

--
Geoffrey S. Mendelson   Passed Technician test!
(215) 242-8712   (Ham Radio)   3/4/93
gsm@mendelson.com   or uunet!gsm001!gsm

Date: 25 Mar 93 15:42:13 GMT
From: opel!slc1!vk2bea!michael@uunet.uu.net
Subject: Nicad Memory Effect-Fact or Myth?
To: info-hams@ucsd.edu

In article <1993Mar21.023002.5207@ssc.com> tad@ssc.com (Tad Cook) writes:
>
 >Do the performance of NiCad batteries suffer when they are repeatedly
 >only slightly discharged? The story goes that one should do a deep
 >discharge every time, before doing a complete charge. Otherwise
 >after a number of shallow charge-discharge cycles the battery cannot
 >do a deep discharge anymore.
 >
 >Last year QST magazine ran an article on nicads that mentioned the
 >memory effect, and said that it was a myth, or at least vastly
 >overstated.
 >
 >I can't seem to find any research that supports either conclusion.
 >The nicad memory belief seems to be quite popular, but none of
 >the proponents that I have talked to can ever point me to any
 >substantial source for data.
 >
 >Anyone know the answer?
 >

I attended a lecture, last year, by a chap who built power systems for
satellites. He stated that the 'memory' effect was only ever noted in one
satellite system (early 60's) and that for all intents and purposes,
it doesn't exist.
There is a much greater danger of discharging a nicad too much, causing
a single cell to reverse and destroying it on the charge cycle. A trickle
charge is the best and safest way to charge them and they can stay on trickle

charge indefineatly.

--
Michael Katzmann   >   Broadcast Sports Technology Inc.
~~~~~~~~~~~~~~~~   <   Crofton, Maryland. U.S.A
Amateur Radio Stations: >
NV3Z / VK2BEA / G4NYV / AAR3VK   <   opel!vk2bea!michael@uunet.uu.net

---

Date: 25 Mar 93 22:00:53 GMT
From: opel!slc1!vk2bea!michael@uunet.uu.net
Subject: Offset to UTC calculation?
To: info-hams@ucsd.edu

In article <930323145741@nauvax.ucc.nau.edu> cvm@nauvax.ucc.nau.edu (Chris Michels) writes:
>How can I determine the offset to UTC at my location? I live in
>Flagstaff, Arizona which is 111 39 02 N and 35 11 53 W according to the
>geographic name server at the University of Michigan.

111 39 02 N ???? Does this mean Flagstaff is north of the north pole (90 deg)?

Assuming you actually meant 111 39 02 W, you divide your longitude by 15 degrees and you get the hour offset from Greenwitch. So it should be around 7.4 hrs behind.

--
Michael Katzmann   >   Broadcast Sports Technology Inc.
~~~~~~~~~~~~~~~~   <   Crofton, Maryland. U.S.A
Amateur Radio Stations: >
NV3Z / VK2BEA / G4NYV / AAR3VK   <   opel!vk2bea!michael@uunet.uu.net

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Date: Fri, 26 Mar 1993 01:10:51 GMT
From: dog.ee.lbl.gov!hellgate.utah.edu!cs.utexas.edu!zaphod.mps.ohio-state.edu!uwm.edu!linac!att!cbnewsm!jeffj@network.UCSD.EDU
Subject: Real NoCodes
To: info-hams@ucsd.edu

In article <1993Mar25.113435.274@hemlock.cray.com> dadams@cray.com writes:
>In article 19854@cbnewsm.cb.att.com, jeffj@cbnewsm.cb.att.com (jeffrey.n.jones) writes:
>
>> It doesn't take a particular class of license to be a idiot!

>
>No, but it helps to be an old fart!
>
>It helps if you have the notion that if I succede then you are a failure.
>It helps to be lifted up in pride.
>It helps if you try to convince yourself that you are better than others.
>(Especially if you are better than others at some otherwise insignifigant
>skill.)

I sure hope this wasn't directed at me!

Jeff Jones

Another Extra for Nocode!

--

 Jeff Jones AB6MB | OPPOSE THE NORTH AMERICAN FREE TRADE AGREEMENT!
 jeffj@seeker.mystic.com | Canada/USA Free Trade cost Canada 400,000 jobs.
 Infolinc BBS 415-778-5929 | Want to guess how many we'll lose to Mexico?

Date: Thu, 25 Mar 93 21:59:26 GMT
From: swrinde!gatech!darwin.sura.net!zaphod.mps.ohio-state.edu!cs.utexas.edu!
geraldo.cc.utexas.edu!slcs.slb.com!leo.asc.slb.com!sjsca4!jones@network.UCSD.EDU
Subject: White House To Auction Airwaves
To: info-hams@ucsd.edu

Gary Coffman (gary@ke4zv.uucp) wrote:
: Layoffs and pay cuts averaging 35% are an industry wide trend.

Yeouch! Makes me glad that when I had to decide between staying in broad-
casting (as a studio engineer) and continuing with my college education, I
picked college. That was about 14 years ago, and even back then I used to
like to go into the TV department at someplace like Sears, and stand there
looking at (the poorly adjusted) TVs until a salescritter would come up and
ask if I was interested in buying one, to which I'd reply "Are you kidding?
I can't afford to buy a TV set. I work for a TV station." and then walk
off while they were still a bit dazed by the reply. ;-)

(BTW, it was the truth. I couldn't afford a new TV set.)

--
Disclaimer: The opinions expressed above are mine and not those of Schlumberger
because they are NOT covered by the patent agreement!

Phone: (602) 345-3638   RF: N7RPQ
Snail: Clark Jones, Schlumberger Technologies, 7855 S. River Pkwy #116, Tempe,

AZ 85284-1825

Date: Thu, 25 Mar 1993 22:21:06 GMT
From: gsm001!gsm001.mendelson.com!gsmlrn@uunet.uu.net
To: info-hams@ucsd.edu

References <1993Mar24.133057.5741@ke4zv.uucp>,
<59Bb03A3ce8o00@amdahl.uts.amdahl.com>, <19930324.184129.81@almaden.ibm.com>
Subject : Re: RFD: reorganization of rec.radio.amateur

In article <19930324.184129.81@almaden.ibm.com> enge@almaden.ibm.com writes:
>Unfortunately, every time we split this thing up:
>
> 1) I get to see more copies of the same message as it is posted to
> multiple groups.

I'll second that. Now that misc forsale is split up we get the same post
to misc.forsale, m.f.computers. m.f.computers.pc, m.f.c.pc, m.f.c.workstation
ad nauseum. It would be better just to live with it instead of having
the same article cloned too many times.

> 2) Much of the traffic is trying to direct the people to the right
> group. The unwanted discussions don't stop anyway.

I agree here too. Look at all the wanted postings in misc.forsale.....

>My vote is to leave things alone...

Me too.

Geoff.

>Roy, AA4RE

--
Geoffrey S. Mendelson   Passed Technician test!
(215) 242-8712   (Ham Radio)   3/4/93
gsm@mendelson.com   or uunet!gsm001!gsm

End of Info-Hams Digest V93 #379
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